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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/474,025	12/28/1999	OK MOON KWAK	K139	1762

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EXAMINER

LY, ANH VU H

ART UNIT PAPER NUMBER

2667

DATE MAILED: 07/21/2004

10

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/474,025

Applicant(s)

KWAK ET AL.

Examiner

Anh-Vu H Ly

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14-19 is/are allowed.
- 6) ☒ Claim(s) 1-6, 10-13, 20-22 and 24-31 is/are rejected.
- 7) ☒ Claim(s) 7-9 and 23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. This communication is in response to applicant's amendment filed May 25, 2004. The proposed amendment to the claims has been entered. Claims 1-31 are pending.

Claim Objections

2. Claim 25 is objected to because of the following informalities: in line 2, "the head-end unit id got modulating" is unclear. Appropriate correction is required.

Claim Rejections - 35 USC § 102

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-6, 10-13, 20-21, and 24-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Jaakkola et al (US Patent No. 6,356,537). Hereinafter, referred to as Jaakkola.

With respect to claims 1, 6, 10-11, 20-21, and 24, Jaakkola discloses in Fig. 1, broadband wireless system architecture such as LMDS (local multipoint distribution system) or LMCS (local multipoint communications system) including a number of CPEs 24, BTS 14, ATM (backbone) network 18, and the network manager 22. Herein, the ATM (backbone) network

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comprising a number of ATM switches is considered as a component of the central office by the examiner. Herein, data from different sources in the ATM network heading to the same destination, associated with the BTS 14 in a defined geographical area or cell such as PBX 24, Fig. 1, are multiplexed and/or vice versa. Further, data transmissions between the ATM network 18 and the BTS 14 are cells, each cell comprising 53 bytes (a central office for multiplexing a downstream data stream having ATM cell structure or de-multiplexing an upstream data having ATM cell structure).

Jaakkola discloses in Fig. 2, a high level illustration of a BTS comprising modules for modulating and de-modulating the multiplexed data for transmissions over air. Herein, the BTS is considered as a head-end by the examiner (a head-end unit for modulating the multiplexed downstream data stream having ATM cell structure provided from the central office unit and de-modulating the upstream data having ATM cell structure into a data stream and forwarding the data stream to the central office unit).

Jaakkola discloses in Fig. 1, BTS 14 and ATM network 18 are wired for carrying ATM cells. Therefore, a connection is set before cells can be carried over the wires since the ATM network 18 connects to a multiple number of BTS (one of the central office unit or the head-end unit establishes a virtual channel between the central office unit and the head-end unit to enable bi-directional communication in a communication network). Further, it should be understood that in an ATM network, multiple services are provided such as CBR, VBR, UBR, or ABR and wherein a virtual channel is set according to such a requested service (an ATM service is provided corresponding to virtual channel). Further, ATM network comprising a number of ATM switches for switching data between the stations connected to, therefore, routing data

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originated from the PBX 24 (customer subscriber) to one of the stations connected to the ATM switch, MAC protocol comprising MAC address is used for such purpose (provide a MAC protocol for routing a data including the data stream, downstream data stream, and upstream data stream to a corresponding destination).

Jaakkola discloses in Fig. 2, that the ARIC communicates the modulated multiplexed data to and from NIU according to ATM cells. Therefore, the MAC layer, resided within the ARIC, is also responsible when modulating and demodulating the received data (MAC instructions are used to modulate the downstream data and demodulate the upstream data).

With respect to claims 2 and 4, Jaakkola discloses in Fig. 9, the functional units of the ARIC, resided within the BTS, comprising processor 116 for configuring and controlling the ARIC (a processor connected to the central office unit analyzing and routing data to the corresponding destination and providing a control data based on the data) and back plane interface 122 and ATM traffic management controller (ATMC) 124 for setting up connections (a signaling circuit for connecting the virtual channel according to the control data of the processor).

With respect to claims 3 and 25-31, Jaakkola discloses in Figs. 2 and 9 the functional units of the ARIC for modulating, converting, combining, outputting data stream, etc... to the subscriber and vice versa.

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With respect to claim 5, Jaakkola discloses in Fig. 1, the broadband wireless system comprising the network manager 22 for managing the connections between the BTS and the subscribers, therefore, knowing and storing information regarding the subscribers are necessary (at least one server for managing a database for storing a service profile of each of the plurality of subscribers).

With respect to claim 12, Jaakkola discloses in Figs. 2 and 9 the functional units of the ARIC for modulating, converting, combining, and outputting data stream to the subscriber and vice versa. Herein, the BTS is also considered as an outdoor unit by the examiner (an outdoor unit for amplifying and providing frequency conversion to the modulated downstream data from the head-end unit for transmission to the corresponding destination and for amplifying and providing frequency conversion to an upstream data from the corresponding destination as upstream data stream for transmission to the head-end unit).

With respect to claim 13, Jaakkola discloses in Fig. 1, the transmitted modulated data stream is received by the network interfaces 12 of the subscribers, herein, signals are de-modulated, amplified, etc... further, forwarded to the corresponding subscribers such as PBX attached to telephone units for the MUX, reverse processing steps are applied when data travels backward (an indoor unit that receives and modulates the amplified downstream data from the outdoor unit and transmits upstream data to the outdoor unit and a peripheral device that receives the modulated amplified downstream data from the indoor unit and transmit the upstream data to the indoor unit).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jaakkola in view of Raychaudhuri et al (US Patent No. 5,638,371). Hereinafter, referred to as Jaakkola and Raychaudhuri.

With respect to claim 22, Jaakkola discloses in Fig. 1, a broadband wireless system for data transmissions in a local multipoint distribution system comprising an ATM network (a switch that switches inputted asynchronous transfer mode cell data and a SAR circuit and a signal processor for segmenting output data and assembling processed data from the signal processor). Jaakkola does not disclose a usage parameter control circuit, coupled to the central office unit that detects errors in the established call connections and controls the usage of the established call connection. Raychaudhuri discloses an error control process, Fig. 8, for detecting errors and controlling usage of the established call connection. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include such error control process in Jaakkola's system, as suggested by Raychaudhuri, to control data transmissions.

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Allowable Subject Matter

5. Claims 7-9 and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. Claims 14-19 are allowed.

Response to Arguments

7. Applicant's arguments filed May 25, 2004 have been fully considered but they are not persuasive.

Applicant states on page 14 that independent claims 1, 20, and 25 have been amended to include some of the subject matter recited in the allowable dependent claims 7-9 and 23.

Applicant should understand that including some of the subject matter, not all of the allowable subject matter, in the amended independent claims, do not mean that independent claims are placed in the condition for allowance. Since not all of the allowable subject matter have been included in the independent claims 1, 20, and 25, the scope of the inventions have changed, therefore, the amendment does not place the claims in the condition for allowance.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kwak et al (US Patent No. 6,665,279) discloses wide band wireless multimedia communication system.

Langston (US Patent No. 6,101,174) discloses low power, short range point-to-multipoint communications systems.

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9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

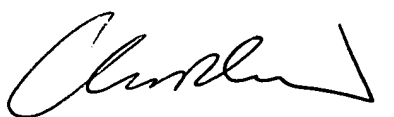
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh-Vu H Ly whose telephone number is 703-306-5675. The examiner can normally be reached on Monday-Friday 7:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 703-305-4378. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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7/14/07